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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/833,358	04/12/2001	Robert M. Smith	5072	3803

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Milliken & Company
P. O. Box 1927
Spartanburg, SC 29304

EXAMINER

GUARRIELLO, JOHN J

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 04/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)	
09/833358	McLarty et al.	
Examiner	Group Art Unit	
John Guarniello	1971	

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period of Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☐ Responsive to communication(s) filed on _____.
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-51 is/are pending in the application.
- ☐ Of the above claim(s) 1-17, 35-51 is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 18-34 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____.
 - ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 5,6
- ☐ Interview Summary, PTO-413
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

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DETAILED ACTION

Election/Restriction

15. Restriction to one of the following inventions is required under 35

U.S.C. 121:

- I. Claims 1-17, drawn to A composite material, classified in class 442, subclass 386.
- II. Claims 18-34, drawn to wallboard, classified in class 428, subclass 312.4.
- III. Claims 35-51, drawn to method of making wallboard, classified in class 156, subclass 39.

16. The inventions are distinct, each from the other because:

17. Inventions I and II are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate

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product of a composite material is deemed to be useful as facing material for housewrap in construction industry and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

18. Inventions II and III are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product wall board can be made by another and materially different process which would involve no aqueous slurry and could involve alcohol.

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Inventions I and III are distinguished from each other because the composite of I does not necessarily require the cementitious material of III.

19. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

20. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

21. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

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22. During a telephone conversation with Thomas Moses on 10/23/2002 a provisional election was made with traverse to prosecute the invention of Group II, claims 18-34. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-17, Group I, and Group III, claims 35-51 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 112

23. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

24. Claims 22-25, 28, 31-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 22, line 1, it is not clear what “fabric” encompasses since this should refer to the “layer” of claim 18, but it could mean fiber. This is a lack of clear antecedent basis.

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In claim 23, line 1, it is not clear what “fabric” refers in claim 18. See reason in claim 22.

In claim 24, line 1, it is not clear what “fabric” refers in claim 18. See reason in claim 22.

In claim 25, line 1, it is not clear what “fabric” refers in claim 18. See reason in claim 22.

In claim 28, line 1, it is not clear what “fabric” refers in claim 18. See reason in claim 22.

In claim 31, line 1, it is not clear what “fabric” refers in claim 18. See reason in claim 22, note the same problem in claims 32 and 33 for the same reason.

It is the Examiner’s position that the other claims, see claim 21 as representative of the other claims, refer clearly to “reinforcing fabric **layer**” in claim 18. All claims should have clear antecedent basis to the claimed component, “reinforcing fabric layer” if so required in the correct line of dependency.

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Claim Rejections - 35 USC § 103

25. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 18-23, 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dierks et al. 3,944,698 in view of Cooper et al. 0019181.

Dierks describes fiber reinforced and improved gypsum wallboard, (see abstract). Dierks describes reinforcing fibers in the form of open fiber mat (corresponding to the claimed nonwoven mat), (column 2, lines 38-67).

Dierks describes the fibers are glass (corresponding to the reinforcing claimed fabric layer), (column 2, lines 56-68). Dierks describes stucco slurry

(corresponding to the cementitious material), (column 1, lines 10-20). Dierks describes the use of adhesive to secure the materials, (column 3, lines 13-18).

Dierks differs from the claimed invention because it is silent about the specific nonwoven mat.

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Cooper describes a cementitious board (corresponding to wall board), (column 3, [0027]). Cooper describes reinforcement can be woven knit, nonwoven or laid scrim open mesh fabric, [0029]. Cooper describes the reinforcement fabric layer or material can be embedded in the cementitious material which fabric is made from glass fibers, [0009, 0016] and can be embedded in the opposite faces, [0016]. Cooper describes a strand count of about 2 to 18 strands per inch which corresponds to the yarn density in threads per inch of the claimed invention.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the nonwoven fabric material of Cooper in the cementitious material of Dierks motivated with the expectation that the material composite would exhibit improved strength as noted in Dierks, (column 2, lines 38-42) since the incorporation into selected portions corresponds to the embedding of the claimed invention.

26. Claims 18-22, 24-34 rejected under 35 U.S.C. 103(a) as being unpatentable over Pilgrim 4,378,405 in view of Newman et al. 6,054,205.

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Pilgrim describes a building board which corresponds to the claimed wallboard with a core of cementitious material, (see abstract). Pilgrim describes mineral fibers embedded in the face of the core, (see abstract). Pilgrim describes the fabric or web is nonwoven glass fiber which corresponds to the claimed invention, (see abstract). Pilgrim describes reinforcing glass fibers can be in the form of woven or knitted fabric or scrim and can be a nonwoven fabric or web bonded with suitable synthetic resin, (column 2, lines 46-49). Pilgrim describes the embedded fabric in the core of the cementitious material, (column 3, lines 9-28). Pilgrim describes a continuous film of cementitious material, (column 3, lines 12-14). Pilgrim is silent about the use of adhesive.

Newman describes glass fiber facing sheet for cement boards corresponding to claimed wallboard, (see abstract). Newman describes cement boards with nonwoven mesh facing sheets of continuous glass yarns, (column 1, lines 15-56). Newman describes adhesive, (column 6, lines 14-29).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the adhesive of Newman with the fabric layer of Pilgrim motivated with the expectation that the improved bonding of the fabric layer would result in improved dimensional stability of the composite material web as noted in Newman, (column 5, lines 48-49).

27. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Guarriello whose telephone number is 703-308-3209. The examiner can normally be reached on Monday to Friday from 8 am to 4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris, can be reached on (703) 308-2414. The fax phone number for the organization where this application or proceeding is assigned is 703-305-5408.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



John J. Guarriello:gj

Patent Examiner

April 14, 2003



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